


Prüfbericht-Nr.: Test Report No.:	50357923 001	Auftrags-Nr.: Order No.:	170250187	Seite 1 von 12 Page 1 of 12
Kunden-Referenz-Nr.: Client Reference No.:	N/A	Auftragsdatum: Order date:	2020-08-26	
Auftraggeber: Client:	AOK Industrial Company Limited 1# Building, Sans Souci Technology Industrial Park, Shajin street, Shenzhen city, Guangdong Province, China			
Prüfgegenstand: Test item:	AOK-WIL Street Light			
Bezeichnung / Typ-Nr.: Identification / Type No.:	AOK-80WIL Class II			
Auftrags-Inhalt: Order content:	Type examination			
Prüfgrundlage: Test specification:	IES LM-79-08 & client's special requirements			
Wareneingangsdatum: Date of receipt:	2020-08-26	Detaillierte Fotodokumentation siehe Anlage zu diesem Bericht Detailed photo documentation see appendix to this report		
Prüfmuster-Nr.: Test sample No.:	003#			
Prüfzeitraum: Testing period:	2020-08-26 to 2020-08-27			
Ort der Prüfung: Place of testing:	See page 2			
Prüflaboratorium: Testing laboratory:	TUV Rheinland (Guangdong) Ltd.			
Prüfergebnis*: Test result*:	See following pages			
geprüft von / tested by:		kontrolliert von / reviewed by:		
2020-08-27 Dere Zhang / Project Engineer 		2020-08-27 Mars Yan / Reviewer		
Datum Date	Name / Stellung Name / Position	Unterschrift Signature	Datum Date	Name / Stellung Name / Position
Sonstiges / Others: N/A				
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:		Prüfmuster vollständig und unbeschädigt Test item complete and undamaged		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. M. Test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

Copy of marking plate:

N/A

Test item

Description..... : AOK-WIL Street Light

Trademark : N/A

Model and/or type reference : AOK-80WIL Class II

Manufacturer..... : Same as client

Factory..... : Same as client

Rating(s)..... : 220-240Vac, 50/60Hz, 80W, 4000K

Test case verdicts

Test case does not apply to the test object..... N/A

Test item does meet the requirement P(ass)

Test item does not meet the requirement F(ail)

Testing

Date of receipt of test item See cover page

Date(s) of performance of test..... See cover page

General remarks:

This report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item(s) tested.

“(see remark #)” refers to a remark appended to the report.

“(see Annex #)” refers to an annex appended to the report.

Throughout this report a point is used as the decimal separator.

List of test equipment must be kept on file and available for review.

Summary of testing:

1. As per client's special requirement, test was conducted under 230Vac, 50Hz, other tests or conditions were not considered in this report.

LED specification:

Model	Manufacturer	Size (mm)	V _F (V)	I _F (mA)	CCT (K)	View angle (°)
LUXEON 3030 2D Line	LUMILEDS	3.00x3.00x0.52	5.8-6.6	120	4000	116

Test location:

Standard-Tech Testing Services Co., Ltd.

No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

2.0	Ambient Conditions		P
2.1	General		P
2.2	Air Temperature	25°C±1°C	P
2.3	Thermal Condition for Mounting SSL Products		P
2.4	Air Movement		P
3.0	Power Supply Characteristics		P
3.1	Waveshape of AC power supply	<3%	P
3.2	Voltage regulation	Within ±0.2% under load	P
4.0	Seasoning of SSL Product		N/A
	No seasoning of SSL product	Tested with no seasoning	N/A
5.0	Stabilization of SSL Product		P
	SSL product has sufficiently stabilized before measurement	150 minutes	P
6.0	Operation Orientation		P
	SSL product shall be stabilized and measured in intended operating orientation	As normal use	P
7.0	Electrical Settings		P
	SSL product shall be operated at rated voltage	230VAC, 50Hz	P
	SSL product with dimming capability are tested at maximum input power condition		N/A
	SSL product with different modes are measured in all relevant modes		N/A
8.0	Electrical Instrumentations		P
8.1	Circuits		P
8.2	Uncertainties		P
9.0	Test methods for Total Luminous Flux measurement		P
9.1	Integrating sphere with a spectroradiometer (Sphere-spectroradiometer system)		P
9.2	Integrating sphere with a photometer head (Sphere-photometer system)		N/A
9.3	Goniophotometer		P
10.0	Luminous Intensity Distribution		P
11.0	Luminous Efficacy		P
	Calculation	See table 1	P
12.0	Test Methods for Color Characteristics of SSL Products		N/A
	Measurements	See table 1	N/A

Table 1		Test Data	
Test item	Measured Value		
	Integrating Sphere	Goniophotometer	
Photometric Results			
Total Luminous Flux (lm)	--	10389	
Luminous Efficacy (lm/W)	--	130.65	
Correlated Color Temperature (CCT, K)	3967	--	
Color Rendering Index (R _a)	83.3	--	
R ₉	11	--	
R _g	95	--	
R _f	85	--	
R _{cs,h1} (%)	-12	--	
SCDM (F4000)	1.6	--	
DUV	0.0020	--	
Chromaticity (Chroma x / Chroma y)	0.3834 / 0.3830	--	
Imax (cd)	--	4488	
Average Beam Angle (50%)	--	--	
Zonal Flux (0-60°)	--	68.7%	
Zonal Flux (60-90°)	--	31.3%	
Zonal Flux (80-90°)	--	1.2%	
Zonal Flux (90-180°)	--	0%	
Spacing Criteria (C/y)	--	22.5° / 1°	
Roadway Class	--	Type III, Short	
Goniophotometer Type	--	Type C	
Electrical Results			
Input Voltage (V)	--	230	
Input Frequency (Hz)	--	50	
Input Current (A)	--	0.3607	
Input Power (W)	--	79.52	
Power Factor	--	0.9583	
THDi (%)	--	6.00	
Additional Information			
Stabilization Time (Light output and electrical power, Minutes)	More than 150min	More than 150min	
Sphere Geometry Configuration	4π	--	
Ambient Temperature (°C) / R.H. (%):	24.6 / 65.0	25.0 / 43.2	
Note:			
- The sample is placed inside the integrating sphere or goniophotometer and power by a regulated supply. Stability is achieved when the variation of 3 readings of light output and electrical power over a period of 30 minutes, taken 15 minutes apart, is less than 0.5%.			

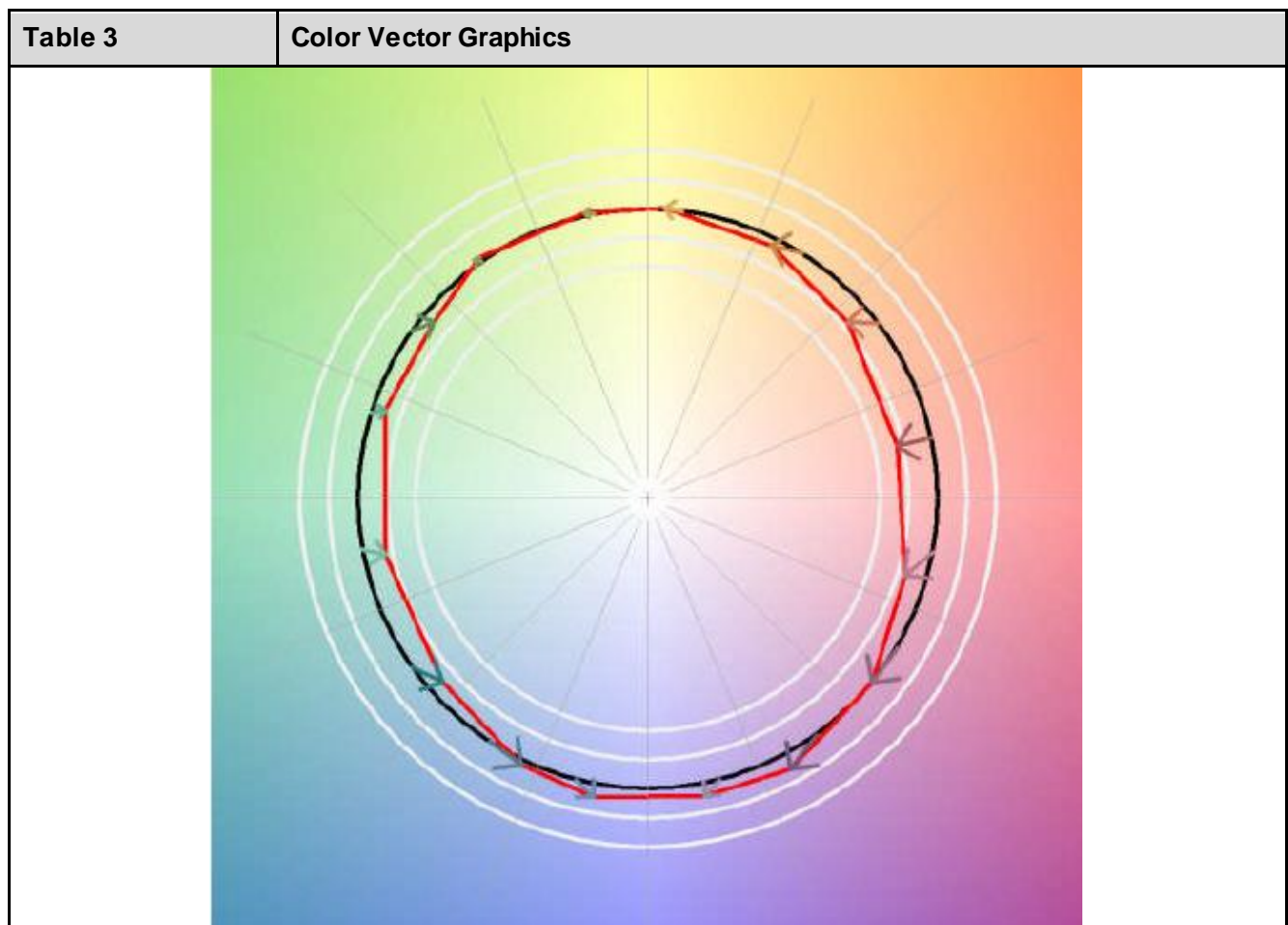
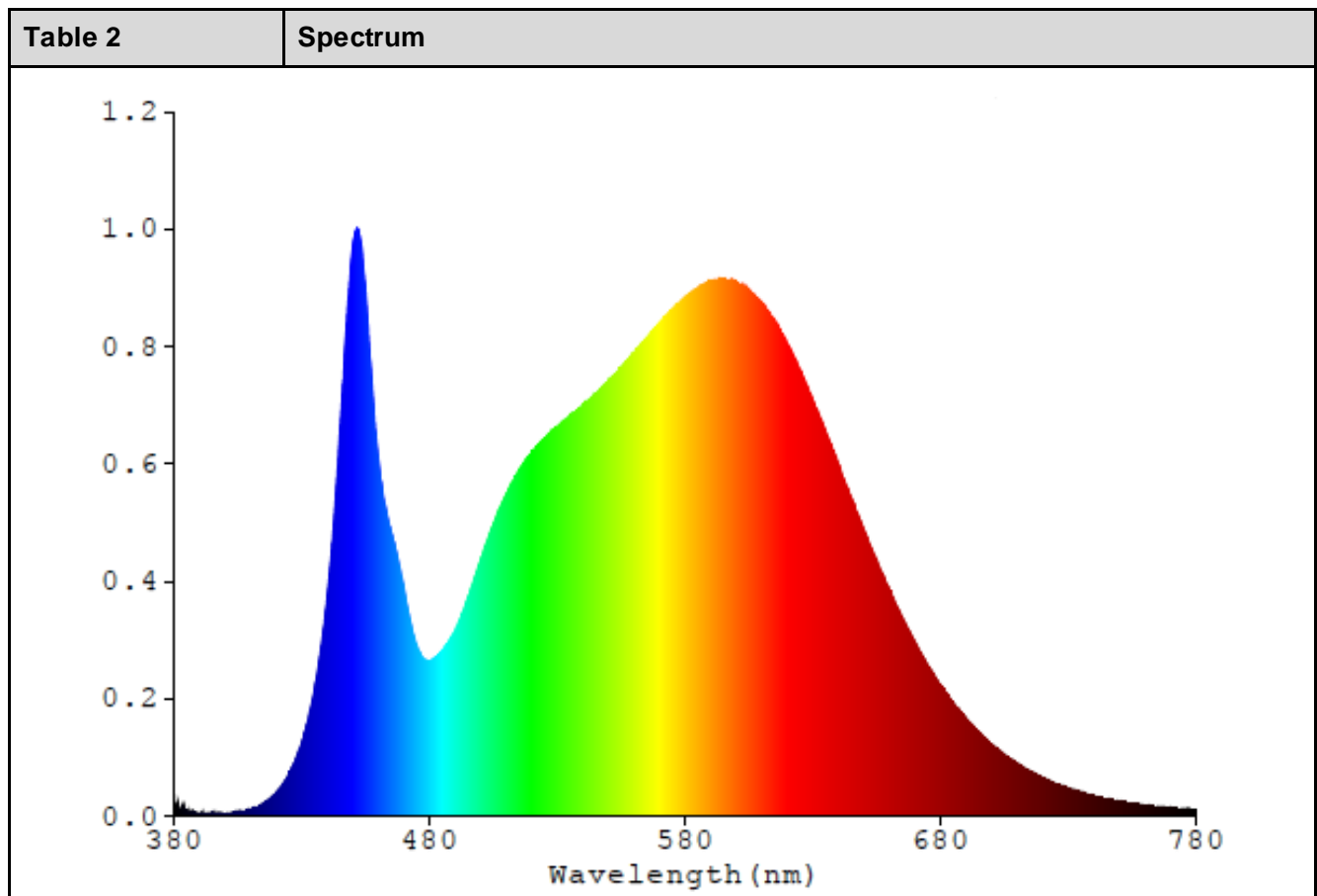


Table 4 Luminous Distribution Diagram

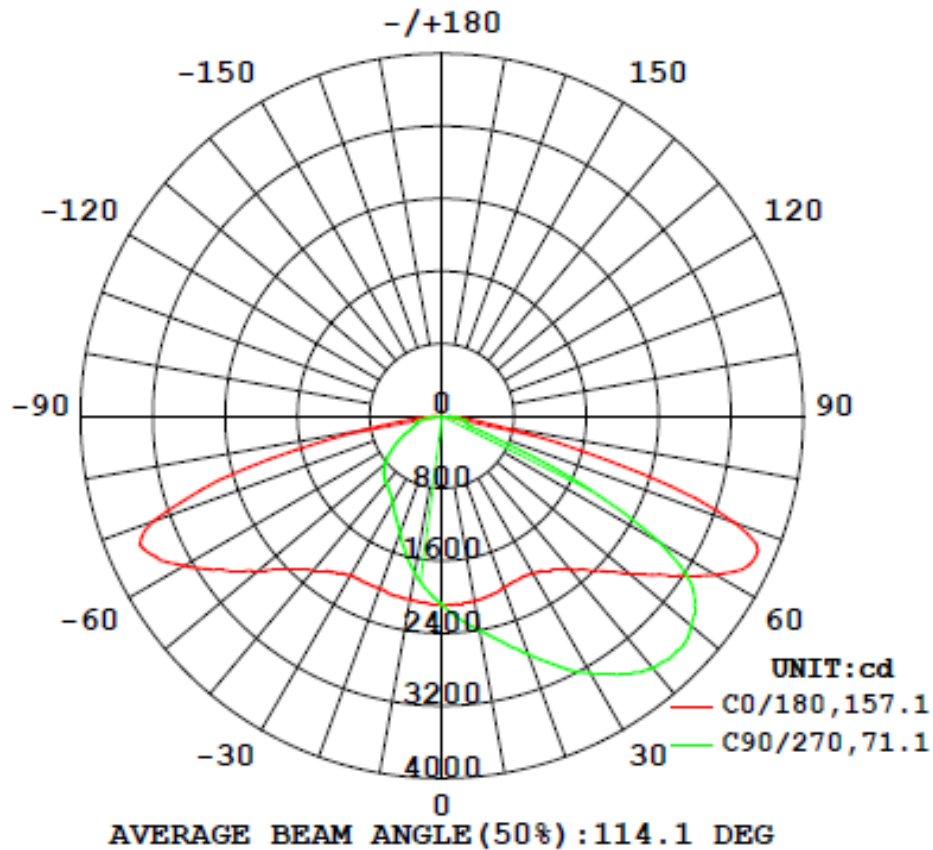


Table 5 Zonal Flux Diagram

°	C0	C45	C90	C135	C180	C225	C270	C315	°	□ zone	□ total	%lum, lamp
10	2075	2304	2404	2297	2057	1854	1758	1875	0- 10	198.7	198.7	1.91, 1.91
20	2015	2521	2796	2548	2027	1597	1376	1604	10- 20	586.3	784.9	7.56, 7.56
30	2010	2816	3278	2901	2030	1320	1100	1318	20- 30	960.6	1745	16.8, 16.8
40	2211	3303	3632	3356	2222	1118	967.6	1116	30- 40	1359	3105	29.9, 29.9
50	2707	3852	3599	3781	2653	974.1	833.7	979.6	40- 50	1814	4919	47.3, 47.3
60	3505	4278	2766	4012	3305	727.1	572.4	734.5	50- 60	2220	7139	68.7, 68.7
70	3455	3331	353.9	3151	3415	379.2	336.5	391.8	60- 70	2162	9301	89.5, 89.5
80	600.0	183.6	227.1	209.8	858.5	162.9	194.5	163.3	70- 80	967.6	10268	98.8, 98.8
90	0	0	0	0	0	0	0	0	80- 90	121.0	10389	100, 100
100	0	0	0	0	0	0	0	0	90-100	0	10389	100, 100
110	0	0	0	0	0	0	0	0	100-110	0	10389	100, 100
120	0	0	0	0	0	0	0	0	110-120	0	10389	100, 100
130	0	0	0	0	0	0	0	0	120-130	0	10389	100, 100
140	0	0	0	0	0	0	0	0	130-140	0	10389	100, 100
150	0	0	0	0	0	0	0	0	140-150	0	10389	100, 100
160	0	0	0	0	0	0	0	0	150-160	0	10389	100, 100
170	0	0	0	0	0	0	0	0	160-170	0	10389	100, 100
180	0	0	0	0	0	0	0	0	170-180	0	10389	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Table 6	LCS Table		
LCS TABLE			
BUG RATING		B2 - U0 - G2	
FORWARD LIGHT	LUMENS	LUMENS %	
LOW(0-30):	1,054.4	10.2%	
MEDIUM(30-60):	3,896.6	37.5%	
HIGH(60-80):	2,238.1	21.5%	
VERY HIGH(80-90):	65.6	0.6%	
BACK LIGHT			
LOW(0-30):	691.1	6.7%	
MEDIUM(30-60):	1,496.6	14.4%	
HIGH(60-80):	889.7	8.6%	
VERY HIGH(80-90):	55.3	0.5%	
UPLIGHT			
LOW(90-100):	0.000	0%	
HIGH(100-180):	0.000	0%	
TRAPPED LIGHT:	0.000	0%	

Table 7		Candela Table (Type C)																
CANDELA TABLE - TYPE C																		
	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360	
0	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	2084	
5	2250	2226	2199	2141	2070	2015	1969	1930	1932	1934	1975	2026	2079	2160	2199	2229	2250	
10	2404	2376	2297	2183	2057	1951	1854	1785	1758	1793	1875	1958	2075	2196	2304	2378	2404	
15	2581	2532	2404	2242	2054	1888	1733	1611	1571	1622	1744	1881	2051	2246	2400	2530	2581	
20	2796	2747	2548	2288	2027	1815	1597	1435	1376	1445	1604	1801	2014	2274	2521	2724	2796	
25	3043	2954	2718	2359	2026	1737	1459	1272	1223	1288	1448	1707	1994	2310	2658	2932	3043	
30	3278	3206	2901	2449	2030	1654	1320	1138	1100	1146	1318	1624	2010	2400	2816	3174	3278	
35	3474	3427	3111	2604	2101	1598	1206	1042	1017	1051	1203	1572	2081	2564	3025	3404	3474	
40	3632	3631	3356	2829	2222	1574	1118	976	968	995	1116	1548	2211	2808	3303	3631	3632	
45	3674	3750	3582	3130	2406	1563	1048	922	917	943	1044	1561	2411	3148	3566	3784	3674	
50	3599	3805	3781	3430	2653	1585	974	845	834	866	980	1577	2707	3517	3852	3863	3599	
55	3402	3714	3928	3692	2966	1604	873	731	711	747	880	1596	3067	3904	4096	3814	3402	
60	2766	3365	4012	4011	3305	1592	727	591	572	602	734	1611	3505	4330	4278	3496	2766	
65	1407	2284	3946	4174	3580	1481	548	452	442	461	554	1506	3791	4482	4201	2446	1407	
70	354	738	3151	3817	3415	1236	379	329	336	338	392	1240	3455	3709	3331	862	354	
75	282	269	1404	2079	2270	825	260	278	305	292	272	764	1935	1408	1327	257	282	
80	227	229	210	354	858	369	163	177	194	183	163	295	600	213	184	214	227	
85	101	126	110	111	180	90	73	60	42	58	70	75	137	92	99	115	101	
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table 8		Equipment List		
Equipment Name	Equipment ID	Model	Manufacturer	Calibration due date
Spectroradiometer	ST-R-327	HAAS-2000	EVERFINE	2021-06-29
Standard lamp	ST-R-332	D204	EVERFINE	2021-06-27
Power meter	ST-R-333	PF2010A	EVERFINE	2021-06-29
DC power source	ST-R-335	WY305	EVERFINE	2021-06-29
AC power source	ST-R-349	DPS1010	EVERFINE	2021-06-29
Standard lamp	ST-R-343	D204C	EVERFINE	2021-06-27
Temperature sensor	ST-R-405	--	EVERFINE	2021-01-22
AC power source	ST-R-357	DPS1010	EVERFINE	2021-06-29
Power meter	ST-R-358	PF2010	EVERFINE	2021-06-29
Goniophotometer	ST-R-355	GO-R5000	EVERFINE	--
Standard lamp	ST-R-359	D908S	EVERFINE	2021-06-27
Temperature/humidity datalogger	ST-R-354	GRL-1-L	EVERFINE	2021-06-29

Appendix: Product Photos

Picture 1: Over view



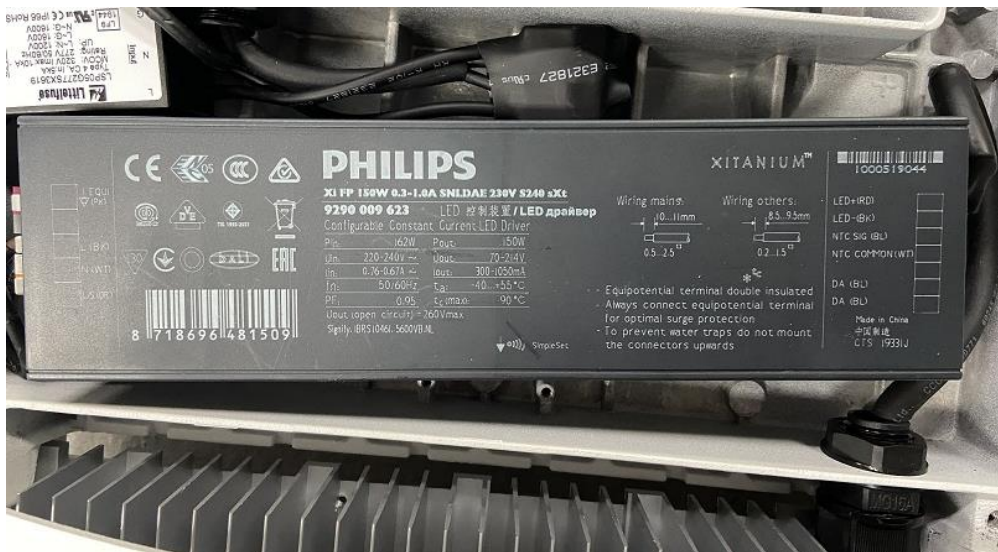
Picture 2: Back view



Picture 3: Internal view



Picture 4: LED driver view [Model: Xi FP 150W 0.3-1.0A SNLDAE 230V S240 sXi]



Picture 5: LED module view



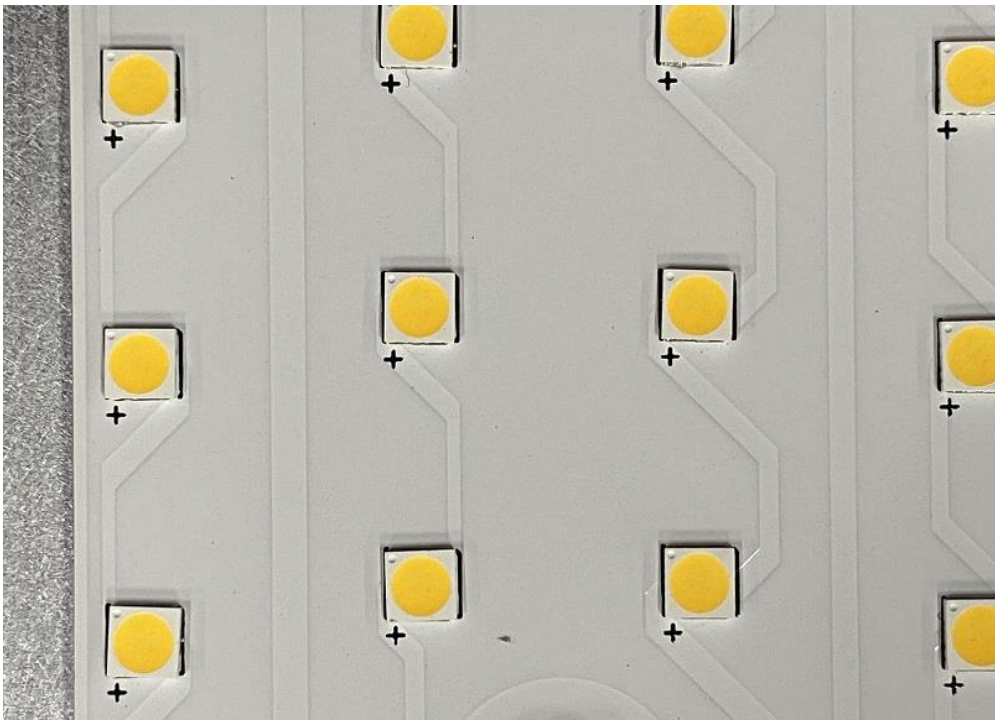
Picture 6: LED module view



Picture 7: LED lens view



Picture 8: LED view



---End of Report---